Portland Harbor AOPC development conceptual process 4/17/2009

Based on the Ecological Risk and Human Health teams development of preliminary PRG's, the GIS team will perform analysis using the LWG tool and interpolated surfaces to identify areas above PRG concentrations and evaluate hilltopping scenarios. Spatial scales (e.g. river sides and river miles) will be evaluated to the extent possible.

The outputs from this analysis will include:

1. Mapping layers with scenarios

The output from the LWG tool has been edited to provide 2 additional grids. The first grid is a reclassification named *"contaminant grid" + "prg" + "threshold value"* with all cells > PRG coded to "1" and all cells < PRG coded as "0". The second grid is a reclassification named *"contaminant grid" + "prg" + "threshold value"* with all cells > hilltopping threshold coded as "1", and all cells < hilltopping threshold coded as "0". **These grids can be combined to create a contaminant specific boundary or area.**

If the hilltopping grid is not produced properly, a substitute grid can be generated by simply reclassifying the base grid using the hilltopping threshold as an input.

2. Summary tables and graphical (chart) representation of areas/concentration for ecological and human health PRG's and spatial scales

3. In order for the hilltopping analysis to be more meaningful, we should incorporate some UCL estimation to provide uncertainty estimates based on John Kern's work (working with John?).

4. Integrated contaminant areas will be overlaid with contextual GIS data layers including outfalls, benthic risk and bioassay data in addition to morphology such as bathymetry and sediment transport analysis.